The rolling assembly consists of two free wheeling 19.00-23 wheels and tires, each canted 5° to the airplane plane of symmetry to reduce the steering torque. Hydraulic steering cylinders provide power for a ±79° steering angle, which is sufficient to pivot the airplane about either main rolling assembly. Since the steering system hydraulic supply is taken from the landing gear "down" line, operation of the steering system is prevented while the gear is retracted. A self-centering cam turns the wheels to a straight forward position as weight is removed from the gear during take-off and before retraction occurs.

Down-latch links, spring loaded on-center, fix the drag links while the landing gear is in the "down" position. A cylinder pulls these latch links off center and permits the gear to be retracted by the retract cylinder. The retract cylinder is mounted to horns on the shock-strut cross-beam and on the upper drag links. In case of hydraulic system failure, gravity plus a bungee spring extend and lock the gear in the down position.

Note:

The retraction motion of the landing gear on the full scale mock-up has been considerably compromised because of the fixed ground position. Normally the piston and rolling assembly would drop 13 inches before retraction would start. This extension of the piston has to be delayed on the mock-up until the tires are sufficiently retracted to be clear of the ground. An electrically actuated lead screw inside the mock-up shock strut does the work of extension that will be performed by gravity and the shock-strut air on the actual airplane. Because of interference caused by this deviation in the retraction motion of the mock-up gear, the door linkage has been placed further aft than is proposed for the actual airplane. Obviously, the tires will interfere with the linkage on the mock-up if steering is attempted. The 1/10 scale model of the nose gear demonstrates the proper door linkage and steering action.